

REVIEWER'S REPORT

Manuscript No.: JNHM- 152

Title: Molecular detection of Adenovirus and Rotavirus Co-Infection in Children with Gastroenteritis.

Recommendation:

Accept after minor revision

Rating	Excel.	Good	Fair	Poor
Originality			✓	
Techn. Quality			✓	
Clarity		✓		
Significance	✓			

Reviewer's ID: JPR-Bilqees Hamza

Detailed Reviewer's Report

The manuscript titled "**Molecular detection of Adenovirus and Rotavirus Co-Infection in Children with Gastroenteritis**" presents a prospective cross-sectional study conducted between January and June 2025 at Ibn Saif Al-Janabi Hospital for Pediatrics in Babylon, Iraq. The authors evaluated 100 stool samples from children aged 6 months to 5 years presenting with acute gastroenteritis using a two-step diagnostic approach: initial antigen screening via ELISA followed by molecular confirmation with real-time PCR.

The study found an overall viral infection rate of 45%, comprising rotavirus mono-infection (24%), adenovirus mono-infection (12%), and rotavirus-adenovirus co-infection (9%). Both mono- and co-infections were significantly associated with clinical symptoms such as fever, severe dehydration, and longer hospital stays compared to virus-negative controls ($p < 0.001$). Crucially, when comparing co-infected patients to mono-infected patients, co-infection was associated with significantly increased disease severity, characterized by higher rates of severe dehydration (77.8% vs. 22.2%, $p = 0.006$) and longer hospital stays ($\$2.89 \pm 0.78$ vs. $\$1.61 \pm 0.64$ days, $p < 0.001$). Real-time PCR cycle threshold (Ct) values did not differ significantly between mono- and co-infected groups, suggesting that co-infection increases clinical severity without necessarily altering viral replication kinetics.

Suggestions for Improvement

1. Presentation of Results and Data Integrity

Jana Nexus: Journal of Health and Medicine

Publisher's Name: Jana Publication and Research LLP

<https://www.jananexushm.com>

REVIEWER'S REPORT

- **Correct Inconsistencies in Text vs. Tables:** Ensure exact alignment between table values and narrative text. For instance, in line 22, the text states the mean hospital stay for mono-infection is \$1.61 \pm 0.64\$, but Table 5 needs to be double-checked for typographical consistency. In Table 3, verify the percentage for "Mild dehydration" under Adenovirus-negative cases (currently shows (31.9%) without a count).
- **Address Small Sample Sizes in Subgroups:** The co-infection group contains only 9 cases ($n = 9$). Apply and explicitly state Fisher's Exact Test for categorical comparisons involving low expected cell counts rather than standard Chi-square tests.
- **Improve Formatting of Figures:** Figures 1 and 2 (amplification curves) are severely low-resolution, pixelated, and missing axis labels and legends. Replace these with crisp, high-resolution vector or original software output graphs with clear, readable labels.

2. Methodological Clarifications

- **Define Diagnostic Strategy:** Clarify whether RT-PCR was performed strictly on ELISA-positive samples or across the entire cohort. If molecular testing was restricted to ELISA-positives (as mentioned in lines 92–93), acknowledge the potential limitation of missing low-viral-load samples that might test negative on ELISA but positive on PCR.
- **Expand Genotyping Context:** The study uses broad target kits for Rotavirus and Adenovirus. Briefly discuss the lack of strain/genotype identification (e.g., HAdV species or Rotavirus G/P types) as a study limitation.

3. Editorial and Textual Clean-up

- **Remove Draft Artifacts:** Clean up formatting glitches and repeating section header lines (e.g., lines 132–135 table placeholders, "VIEW IN IJ", "UNDER PEER REVIEW" watermarks) throughout the manuscript.
- **Standardize Reference Formatting:** References 16–20 in the reference list use hyphenated numbers (e.g., 16-ZIAEI) rather than the standardized bracketed/numbered format used in references 1–15. Ensure unified reference formatting according to journal style.

Recommendation to the Editor

Decision: Accept with Minor Revision

Recommendation Text:

The manuscript provides valuable regional clinical and molecular data on rotavirus and adenovirus co-infections in Iraqi children. The finding that co-infection significantly exacerbates clinical severity (severe dehydration and extended hospitalization) without altering real-time PCR Ct values is well-presented and clinically relevant. Publication is recommended following minor revisions to fix low-

Jana Nexus: Journal of Health and Medicine

Publisher's Name: Jana Publication and Research LLP

<https://www.jananexushm.com>

REVIEWER'S REPORT

resolution figures, address minor typographical/table alignment errors, and clean up bibliographic formatting.